

# Hubble Cycle 22 Proposal Selection

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*Hubble Space Telescope* embarked on its 22<sup>nd</sup> cycle of science observations in October 2014. The scientific demand for *Hubble* data remains high and diverse, with this cycle receiving slightly more proposals than Cycle 21—the second-largest number of proposals for any *Hubble* cycle. In April 2014, the Institute received 1134 Cycle 22 proposals requesting ~19,900 orbits. The proposals included 122 archival proposals and 78 theory proposals. Co-investigators were drawn from 45 U.S. states, 44 countries, and 6 continents.

The *Hubble* Time Allocation Committee (TAC) reviewed the proposals in June 2014, and recommended the allocation of 3707 *Hubble* orbits to 263 programs. The selected programs span a broad range of science questions, from the *New Horizons* search for Kuiper Belt asteroids (PI J. Spencer) and the study of exoplanet atmospheres (PI K. France), to improved measurements of the Hubble Constant (PI W. Freedman) and detection of the brightest galaxies in the early universe (PI M. Trenti).

## Review Process

The *Cycle 22 Call for Proposals (CP)* was released on January 6, 2014, announcing the opportunity to propose observations with any current *Hubble* instruments—Advanced Camera for Surveys (ACS), Cosmic Origins Spectrograph (COS), Fine Guidance Sensors (FGS), Space Telescope Imaging Spectrograph (STIS), and Wide Field Camera 3 (WFC3)—or to request funding for *Hubble* archival and theoretical research programs. The *Cycle 22 CP* carried over two initiatives from Cycle 21 relating to ultraviolet (UV) and medium-sized proposals. Recognizing the unique and limited lifetime of *Hubble* UV capabilities, the UV Initiative program encourages the community and the TAC to increase the fraction of *Hubble* time dedicated to observations at wavelengths short of 3200 Å. Additionally, ~600 orbits were nominally allocated to medium proposals, requesting 34–75 orbits, in order to boost the success rate of this historically challenging program size. For the first time, *Hubble* proposers had the opportunity to request joint observations with the National Radio Astronomical Observatory (NRAO), for up to 3% of the time on NRAO's North American facilities (Green Bank Telescope, Very Large Array, and Very Long Baseline Array). Joint *Hubble–Spitzer*, *Chandra*, *XMM–Newton*, and NOAO proposals were also possible.

Using the ASTRONOMER'S PROPOSAL TOOL, astronomers electronically submitted 1134 proposals by the *Hubble* Cycle 22 proposal deadline on April 11, 2014. Once sorted by their keywords, the proposals were assigned to individual panels. The fourteen *Hubble* Cycle 22 review panels consisted of two cosmology panels, three galaxies panels, two panels for active galactic nuclei and quasi-stellar objects, two stellar-populations panels, three star panels, and two panels for planets and solar-system objects. The designation of each science area to at least two panels minimized conflicts of interest with either reviewers or proposers. Over 140 community members, recruited from the United States, Canada, and Europe, served on the *Hubble* Cycle 22 TAC panels. Dr. Pat McCarthy of Carnegie Observatories served as the Cycle 22 TAC chair, and Prof. James Binney of University of Oxford, Dr. Catherine Cesarsky of Commissariat à l'Énergie Atomique (CEA), and Prof. Rosemary Wyse of the Johns Hopkins University served as TAC members at large.

Each panel, consisting of ~9 panelists and a panel chair, was assigned ~70–90 small (<35 orbits) and medium (35–74 orbits) proposals to review and rank. To decrease the burden on the reviewers, each reviewer submitted preliminary grades for only two-thirds of the proposals in his/her panel. About two weeks prior to the TAC meeting, those preliminary grades determined the initial ranking within each panel. Proposals in the bottom 40% of the ranking were triaged and not discussed further during the TAC process—unless resurrected by an unconflicted panelist. We assigned each proposal to a primary and secondary reviewer to lead the discussion during the three-day panel meeting. The panels regraded and ranked the non-triaged proposals. Medium proposals were ranked with small proposals. Nevertheless, each panel could vote to award panel orbits to any medium proposal (ensuring its success), or to allow the proposal to compete for orbits from the general pool allocated to the medium proposals. Additionally, all the mirror panels discussed the related large and Treasury programs, which were then ranked by the panel chairs during the merged TAC discussion. For the first time, unconflicted TAC members obtained additional reviews from external experts in order to enable a well-informed discussion for the large and Treasury programs. About a week after the TAC meeting, the Institute director performed the final review of the programs recommended by the TAC, and the Cycle 22 results were announced shortly thereafter.



The *Hubble* review process continues to strive for the highest standards of impartiality and fairness. Conflicts of interest for each reviewer are identified based on institution and publication record, and mirror panels are used to avoid strong conflicts when possible. Upon distribution of the proposals to the panel, each panelist must identify any remaining conflicts of interest, including competing proposals, mentorship relationships, and close collaborations. Panelists cannot grade proposals for which they are conflicted, and in the case of strong conflicts, cannot participate in the discussion. Additionally, the Institute has taken steps to address the unconscious gender bias of the *Hubble* TAC process that has resulted in a small but statistically significant over-representation of male PIs relative to female PIs in every *Hubble* cycle. This year, we provided only the initials for the PI and Col's given names, and removed their names from the cover page and proposal IDs. Finally, the *Hubble* TAC orientation program now includes discussion of the historical over-representation of male *Hubble* PIs and the issue of unconscious bias. These steps did not result in gender parity among the accepted Cycle 22 programs. STScI will continue to study this issue.

**Results**

With 263 of 1134 proposals accepted, the average *Hubble* Cycle 22 acceptance rate was 18.6%. The oversubscription rate for all General Observer programs was slightly lower this year than previous years (thanks to the completion of the *Hubble* Multi-Cycle Treasury programs), with a factor 4.25 over-subscription per program and factor 5.37 over-subscription per orbit. The over-subscription for Archival/Theory funding remains higher than earlier cycles, at factor 4.15 per proposal. Medium Proposals showed a modest improvement in their success rate, with ~13% approved (vs. ~9% approved in Cycle 21). Ultraviolet Initiative programs constituted 38% of the approved Cycle 22 Programs. European PIs lead 23% of the Cycle 22 accepted programs. One joint *HST*-NRAO program was approved, as were 2 joint *HST*-XMM programs, 1 joint *HST*-Chandra program, and three *HST*-NOAO programs. No joint *HST*-Spitzer programs were approved in Cycle 22.

WFC3 continues to serve at *Hubble*'s workhorse instrument, with 57% of the time allocated to the various WFC3 modes (16% WFC3/IR imaging, 8% WFC3/IR grism, 26% WFC3/UVIS imaging). ACS also remains popular despite its advanced age, with 19% of the time allocation. Finally, COS and STIS continue to offer unique windows into the ultraviolet, with 12.6% and 11.4% of the Cycle 22 time allocation, respectively.

The *Hubble* Cycle 22 time allocation was well-matched to the proposal pressure in each of the different science categories, with each category typically receiving a similar fraction of approved and requested orbits. Cosmology programs constitute the largest allocation in this cycle (22%), and the allocation of *Hubble* observations of extra-solar planets is 8.5% in this cycle. Solar system observations make up 10.9% of *Hubble* observations in Cycle 22.

**Acknowledgements:**

We thank all of the *HST* TAC members and external reviewers for their service on the *HST* Cycle 22 TAC. Numerous STScI personnel contributed to the support of the *HST* Cycle 22 review process. Science Policies Group astronomers Claus Leitherer, Andy Fruchter, Andrew Fox, Janice Lee, Jennifer Lotz, and Neill Reid were responsible for selecting the panelists, assigning the proposals to panels and panelists,

Summary of Cycle 22 Results

Proposals	Requested	Approved	% Accepted	ESA Accepted	ESA % Total
General Observer	884	208	23.5%	47	22.6%
Snapshot	51	7	13.7%	3	42.9%
Archival Research	113	19	16.8%	-	
AR Legacy <sup>1</sup>	9	3	33.3%	-	
Theory <sup>1</sup>	78	26	33.3%	-	
Total	1134	263	23.2%	50	23.3%
<b>Primary Orbits</b>	<b>19900</b>	<b>3707</b>	<b>18.6%</b>	<b>540</b>	<b>14.6%<sup>2</sup></b>

<sup>1</sup>One AR Legacy is also a Theory Proposal

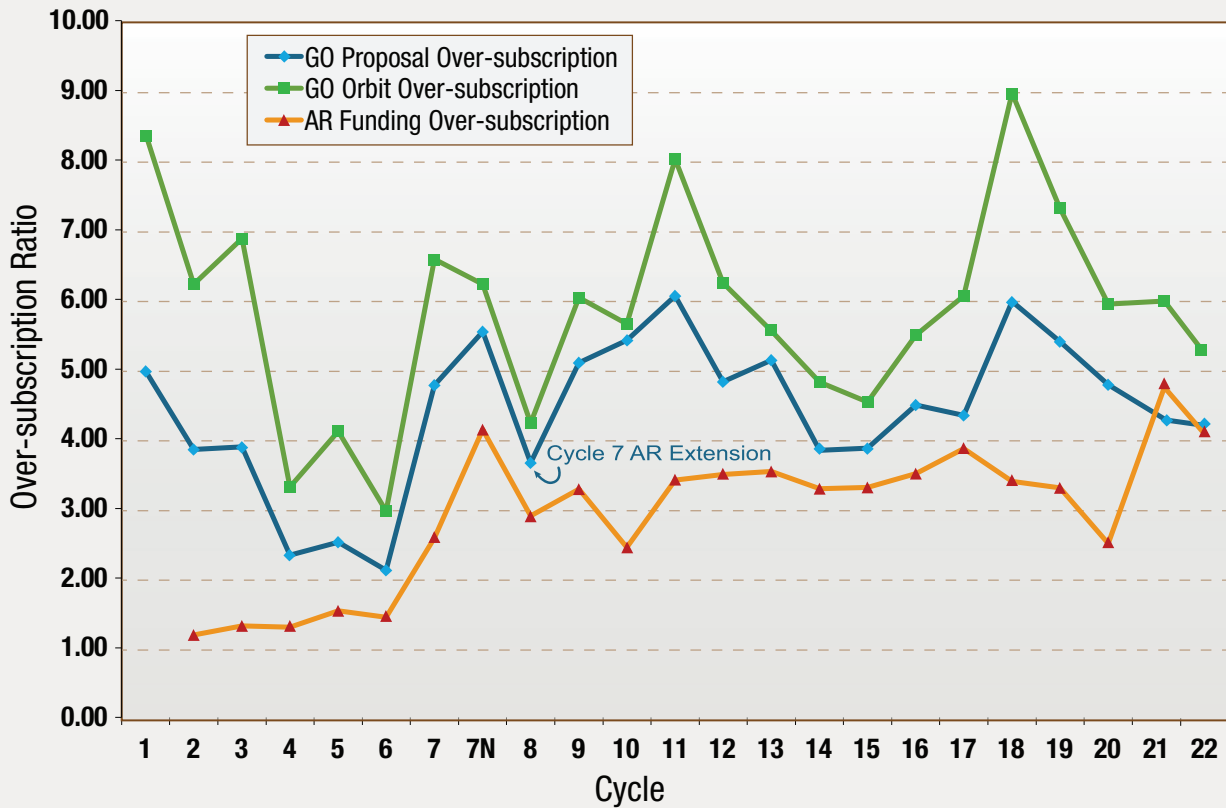
<sup>2</sup>ESA Orbit % does not include 480 Pure Parallel Orbits

coordinating policy, and providing oversight during the review. Technical Manager Brett Blacker received, organized, and distributed the proposals, oversaw the proposal database, announced the results, and prepared the statistical summaries and figures presented here. The TAC logistics were devised and coordinated by Sherita Hanna, with administrative support from Roz Baxter, Laura Bucklew, Geoff Carter, Kelly Coleman, Martha Devaud, Marvin Harris, Flory Hill, Tracy Lamb, Kari Marzola, Alisa Meizlish, Kim Oyler, Karen Petro, Karyn Poletis, Michele Sharko, Rickell Sheppard, Darlene Spencer, Rolanda Taylor, Annie Valenzuela, and Loretta Willers. Panel support was provided by Amber Armstrong, Andrea Bellini, Azalee Bostroem, Rongmon Bordoloi, Stacey Bright, Matteo Correnti, Lisa Frattare, Rebekah Hounsell, Shelley Meyett, Chris Moriarty, Molly Peebles, Karla Peterson, Tony Roman, Gregory Snyder, and Laura Watkins. Instrument expertise was provided by Marco Chiaberge, Linda Dressel, Norman Grogin, Matt Lallo, John MacKenty, Aparna Maybhate, Ed Nelan, Cristina Olivera, Charles Profitt, and Julia Roman-Duval. IT support was provided by Val Ausherman, Romeo Gourgue, Craig Hollinshead, Craig Levy, Jessica Lynch, Thomas Marufu, Greg Masci, Glenn Miller, Corey Richardson, Patrick Taylor, Calvin Tullios and other members of the Information Technology Services Division. Facilities support was provided by Andre Deshazo, Jay Diggs, Rob Franklin, Rob Levine, Glenn Martin, Greg Pabst, Sonia Saldana, Frankie Schultz, Mike Sharpe, Mike Venturella, and G. Williams. Ray Beaser, Vickie Bowersox, Margie Cook, Karen Debelius, Cathy Donellan, Adia Jones, Lisa Kleinwort, Lisa Kouroupis, Terry McCormack, Amy Power, Val Schnader, Paula Sessa, and Sarah Shin provided support from the Business Resources Center. Pam Jeffries provided support from the Office of Public Outreach, and Zak Concannon provided assistance from the Copy Center. Finally, we thank Professor Dan Reich and Bloomberg facilities staff for providing the use of meeting rooms in the Johns Hopkins Bloomberg building.

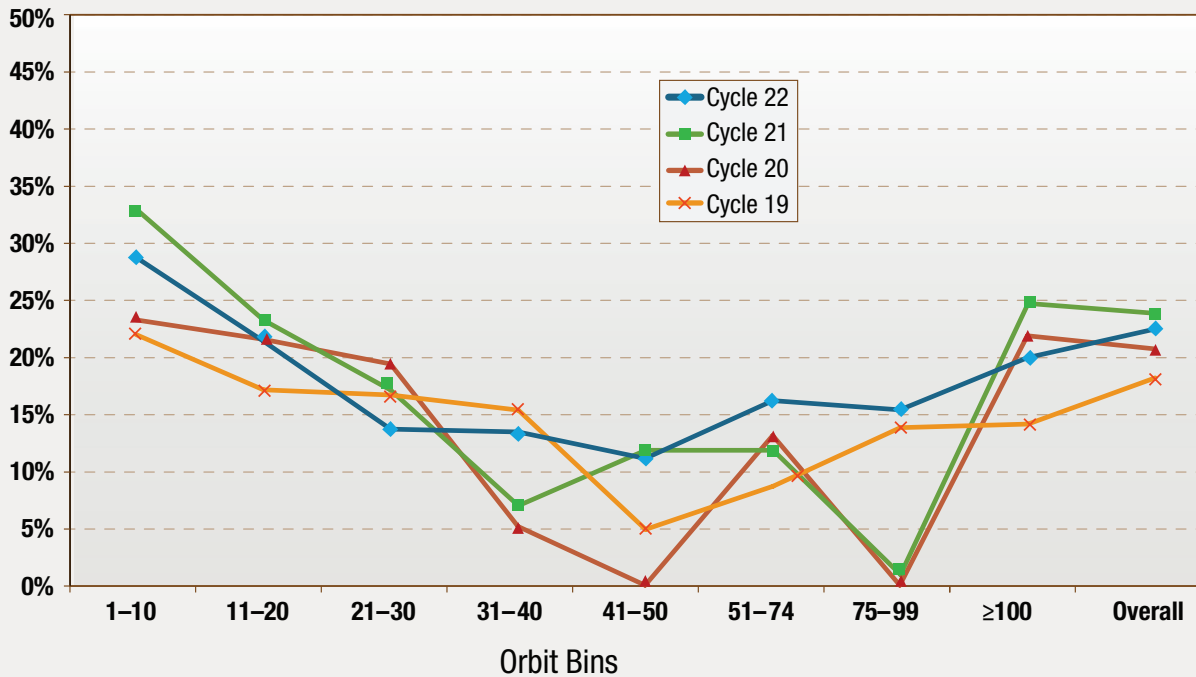
## Proposal Breakdown by PI Country

Country	Submitted	Approved	Country	Submitted	Approved
Australia	12	1	Japan	9	2
Belgium	2	0	Korea	4	0
Brazil	2	1	Norway	1	0
Canada	12	4	Russia	5	0
Chile	15	2	Spain	10	1
China	7	0	Sweden	9	3
Czech Republic	1	0	Switzerland	11	3
Denmark	5	1	The Netherlands	12	4
Finland	2	0	Ukraine	1	0
France	24	6	United Kingdom	72	14
Germany	37	11	United States	842	203
Ireland	1	0	Uruguay	1	0
India	1	0			
Israel	3	2			
Italy	34	5	<b>ESA Proposals</b>	<b>229</b>	<b>50</b>

## Proposal Acceptance Ratio: Over-subscription by Cycle



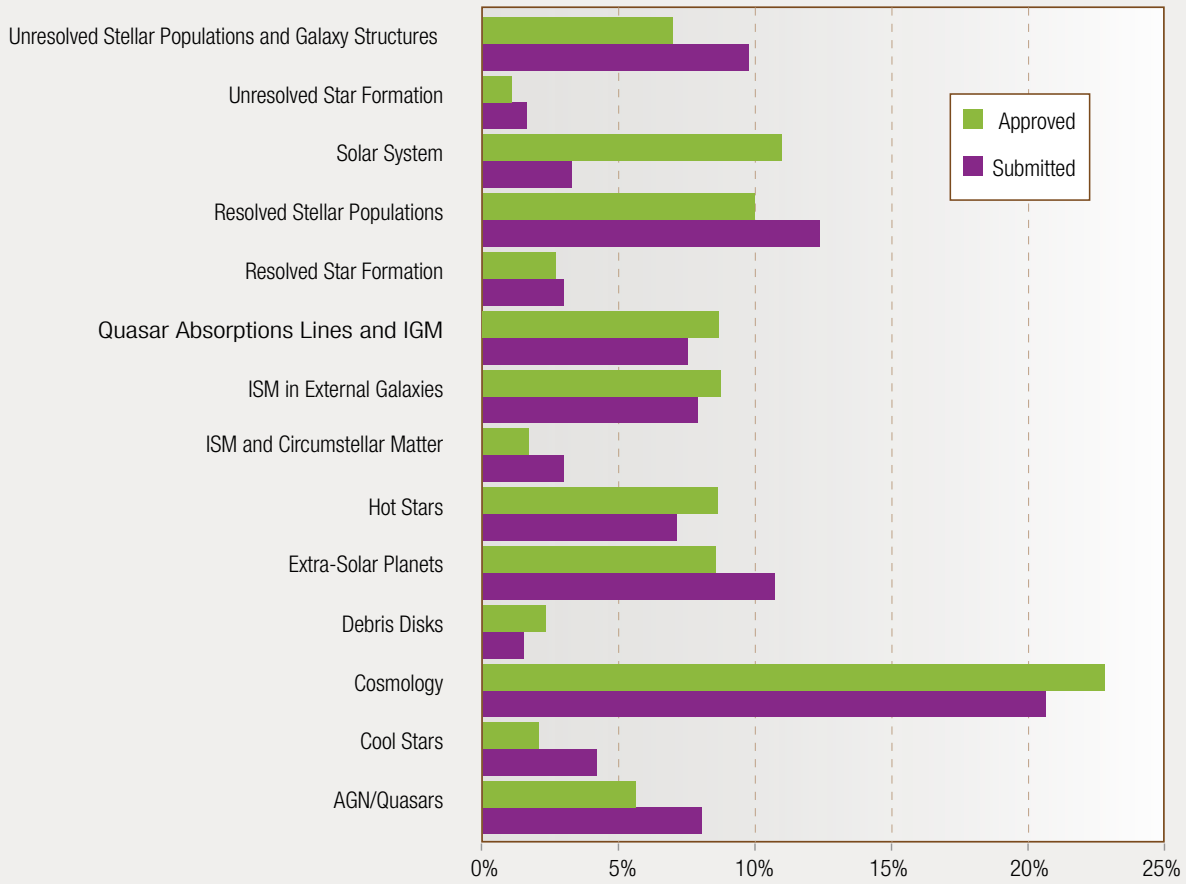
## Proposal Success Rate as a Function of Orbit Request, Cycles 19–22



## Cycle 22 Instrument Statistics

Configuration	Mode	Prime %	Coordinated Parallel %	Total	Instrument Prime Usage	Instrument Prime + Coordinated Parallel Usage	Pure Parallel Usage	Snap Usage
ACS/SBC	Imaging	2.1%	0.0%	1.7%			0.0%	0.0%
ACS/SBC	Spectroscopy	0.0%	0.0%	0.0%			0.0%	0.0%
ACS/WFC	Imaging	13.4%	38.4%	18.2%			0.0%	12.4%
ACS/WFC	Ramp Filter	1.3%	0.0%	1.1%	16.8%	21.0%	0.0%	0.0%
ACS/WFC	Spectroscopy	0.1%	0.0%	0.0%			0.0%	0.0%
COS/FUV	Spectroscopy	13.8%	0.0%	11.2%			0.0%	13.8%
COS/NUV	Imaging	0.1%	0.0%	0.1%	17.2%	13.8%	0.0%	0.0%
COS/NUV	Spectroscopy	3.2%	0.0%	2.6%			0.0%	0.0%
FGS	POS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FGS	TRANS	0.0%	0.0%	0.0%			0.0%	0.0%
STIS/CCD	Imaging	1.9%	0.0%	1.5%			0.0%	0.0%
STIS/CCD	Spectroscopy	4.3%	0.0%	3.5%			0.0%	55.1%
STIS/FUV	Imaging	0.2%	0.0%	0.1%	15.5%	12.5%	0.0%	0.0%
STIS/FUV	Spectroscopy	5.3%	0.0%	4.3%			0.0%	0.0%
STIS/NUV	Imaging	0.0%	0.0%	0.0%			0.0%	0.0%
STIS/NUV	Spectroscopy	3.9%	0.0%	3.1%			0.0%	0.0%
WFC3/IR	Imaging	16.0%	21.1%	16.9%			50.0%	0.0%
WFC3/IR	Spectroscopy	8.2%	8.6%	8.3%	50.5%	52.6%	0.0%	0.0%
WFC3/UVIS	Imaging	26.2%	31.9%	27.3%			50.0%	18.7%
WFC3/UVIS	Spectroscopy	0.1%	0.0%	0.1%			0.0%	0.0%
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Imaging</b>	<b>68.1</b>	<b>ACS</b>	<b>19.1%</b>					
<b>Spectroscopy</b>	<b>31.9</b>	<b>COS</b>	<b>12.6%</b>					
		<b>FGS</b>	<b>0.0%</b>					
		<b>STIS</b>	<b>11.4%</b>					
		<b>WFC3</b>	<b>56.9%</b>					

# Orbits by Science Category



## TAC Members and Panelists

Name	Institution
<b>TAC Members</b>	
Patrick McCarthy, TAC Chair	Giant Magellan Telescope
James Binney, At Large	University of Oxford
Catherine Cesarsky, At Large	Commissariat a l'Energie Atomique
Rosemary Wyse, At Large	The Johns Hopkins University
<b>Extra-Galactic Members</b>	
Viviana Acquaviva	City University of New York
Misty Bentz	Georgia State University
Gary Bernstein	University of Pennsylvania
Gurtina Besla	Columbia University
Elizabeth Blanton	Boston University
Todd Boroson	Las Cumbres Observatory Global Telescope
Sanchayeeta Borthakur	The Johns Hopkins University
Rychard Bouwens	Universiteit Leiden
David Bowen	Princeton University
Marusa Bradac	University of California–Davis
Mark Brodwin	University of Missouri
Andrew Bunker	Oxford University
Sebastiano Cantalupo	University of California–San Diego
Michele Cappellari	University of Oxford
Caitlin Casey	University of California–Irvine
Stéphane Charlot	CNRS, Institut d'Astrophysique de Paris
Ranga Ram Chary	California Institute of Technology
Christopher Churchill	New Mexico State
Charlie Conroy	University of California–Santa Cruz
Kathy Cooksey	Massachusetts Institute of Technology
Asantha Cooray	University of California–Irvine
Alison Crocker	University of Toledo
Roelof de Jong	Astrophysikalisches Institut Potsdam
Tiziana Di Matteo	Carnegie Mellon University
Aleksandar Diamond-Stanic	University of Wisconsin–Madison
Chris Fassnacht	University of California–Davis
Natascha M. Forster Schreiber, Chair	Max-Planck-Institut für extraterrestrische Physik
Johan Fynbo	DARK Cosmology Centre
Suvi Gezari	University of Maryland
Frederick Hamann	University of Florida
Ann Hornschemeier	NASA/Goddard Space Flight Center
Tesla Jeltema	University of California–Santa Cruz
Linhua Jiang	Arizona State University

Name	Institution
Kelsey Johnson, Chair	University of Virginia
Dale Kocevski	University of Kentucky
Varsha Kulkarni	University of South Carolina
Mark Lacy	National Radio Astronomy Observatory
Tod R. Lauer	National Optical Astronomy Observatory
Nicolas Lehner	University of Notre Dame
Karen Leighly	University of Oklahoma Norman Campus
Chun Ly	NASA/Goddard Space Flight Center
Bahram Mobasher	University of California–Riverside
Leonidas Moustakas	Jet Propulsion Laboratory
Preethi Nair	University of Alabama
Benjamin Oppenheimer	University of Colorado at Boulder
Alexandra Pope, Chair	University of Massachusetts–Amherst
J. Xavier Prochaska, Chair	University of California–Santa Cruz
Sandhya Rao	University of Pittsburgh
Jane Rigby	NASA/Goddard Space Flight Center
Steven Rodney	The Johns Hopkins University
Paola Rodriguez Hidalgo	University of Toronto
Kate Rubin	Harvard-Smithsonian Center for Astrophysics
Sandra Savaglio	Max-Planck-Institut für extraterrestrische Physik
Brian Siana	University of California–Riverside
Suresh Sivanandam	University of Toronto
Dan Stark	University of Arizona
Charles Steinhardt	California Institute of Technology
Daniel Stern	Jet Propulsion Laboratory
Harry Teplitz	California Institute of Technology
David Thilker	The Johns Hopkins University
Erik Tollerud	Yale University
Kim-Vy Tran	Texas A&M University
Christy Tremonti, Chair	University of Wisconsin
Jonathan Trump	Pennsylvania State University
Sylvain Veilleux, Chair	University of Maryland
David Wake	University of Wisconsin
Bart Wakker	University of Wisconsin
Risa Wechsler	Stanford University
David Weinberg, Chair	Ohio State University
Steve Zepf	Michigan State

## TAC Members and Panelists

Name	Institution
<b>Planetary Panel Members</b>	
David Ardila	California Institute of Technology
Gilda Ballester	University of Arizona
Travis Barman	Lowell Observatory
James Bauer	Jet Propulsion Laboratory
Jacob Bean	University of Chicago
Nuria Calvet, Chair	University of Michigan
Jay Farihi	University College of London
Yan Fernandez	University of Central Florida
Boris Gänsicke	University of Warwick
Erika Gibb	University of Missouri
Caitlin Griffith	University of Arizona
Brigitte Hesman	University of Maryland
Paul Kalas	University of California–Berkeley
Nikole Lewis	Massachusetts Institute of Technology
Carl Melis	University of California–San Diego
Katie Morzinski	University of Arizona
Glenn Orton	Jet Propulsion Laboratory
Scott Sheppard	Carnegie Institution of Washington
Diana Valencia	University of Toronto
Faith Vilas, Chair	Planetary Science Institute
<b>Galactic Panel Members</b>	
Thomas Ayres, Chair	University of Colorado
Jeremy Bailin	University of Alabama
Martha Boyer	NASA/Goddard Space Flight Center
Elisabetta Caffau	Observatoire de Paris
Zach Cano	University of Iceland
Brian Chaboyer	Dartmouth College
Rupali Chandar	University of Toledo
Ben Davies	Liverpool John Moores University
Selma E. de Mink	Carnegie Institution of Washington
Rosanne Di Stefano	Harvard-Smithsonian Center for Astrophysics
Tuan Do	University of Toronto
Kevin France	University of Colorado
Miriam García	Centro de Astrobiología Instituto Nacional de Técnica Aeroespacial
Douglas Gies	Georgia State University
Robert Gutermuth	University of Massachusetts
Ulrike Heiter	Uppsala University
Vincent Henault-Brunet	University of Surrey

Name	Institution
D. John Hillier, Chair	University of Pittsburgh
Jon Holtzman, Chair	New Mexico State University
Christopher Johns-Krull	Rice University
Christian Johnson	Harvard University
Mansi Kasliwal	Carnegie Institution of Washington
Christian Knigge	University of Southampton
Kaitlin Kratter	University of Arizona
Andreas Küpper	Columbia University
Jessica Lu	University of Hawaii
Ann-Marie Madigan	University of California–Berkeley
Kristen McQuinn	University of Minnesota
Maryam Modjaz	New York University
Yaël Nazé	Université de Liège
David Nidever	University of Michigan
Eva Noyola	University of Texas–Austin
Jenny Patience	Arizona State University
Anne Pellerin	State University of New York–Geneseo
Giampaolo Piotto, Chair	University of Padova
Imants Platais	The Johns Hopkins University
Jose Prieto	Princeton University
Judith Provencal	University of Delaware
Ivan Ramirez	University of Texas–Austin
Marina Rejkuba	European Southern Observatory
Ian Roederer	Carnegie Institution of Washington
Roger Romani	Stanford University
Nathan Smith	University of Arizona
Donald Terndrup	Ohio State University
Eleonora Troja	NASA/Goddard Space Flight Center
Enrico Vesperini	Indiana University
Dan Weisz	University of California–Santa Cruz
Daniel Welty	University of Chicago
Klaus Werner	Eberhard Karls Universität Tübingen
Benjamin Williams	University of Washington
Jonathan Williams, Chair	University of Hawaii



## Accepted Proposals

Name	Institution	ESA Member	Type	Title
<b>Extra-Galactic Programs</b>				
Matthew Auger	University of Cambridge	YES	GO	A SHARP View of the Structure and Evolution of Normal and Compact Early-type Galaxies
Aaron Barth	University of California – Irvine		GO	Measuring the Black Hole Mass in the Brightest Cluster Galaxy NGC 1275
Matthew Bayliss	Harvard University		GO	Resolving Lyman-alpha Emission on Physical Scales $<270$ pc at $z > 4$
Alessandra Beifiori	Universitäts-Sternwarte München	YES	GO	Unveiling the Mass-to-light Distribution of High-redshift Clusters
Andrew Benson	Carnegie Institution of Washington		AR	Going out with a Bang or a Whimper? Star Formation and Quenching in the Local Group's Satellite Galaxies
Misty Bentz	Georgia State University Research Foundation		GO	High-resolution Imaging of Active Galaxies with Direct Black Hole Mass Measurements
Rongmon Bordoloi	Space Telescope Science Institute		GO	How Galaxy Mergers Affect Their Environment: Mapping the Multiphase Circumgalactic Medium of Close Kinematic Pairs
Rychard Bouwens	Universiteit Leiden	YES	GO	A Complete Census of the Bright $z \sim 9-10$ Galaxies in the CANDELS Data Set
David Bowen	Princeton University		GO	Baryon Structures Around Nearby Galaxies: Using an Edge-on Disk to Assess Inflow/Outflow Models
Rebecca Bowler	Royal Observatory Edinburgh	YES	GO	Unveiling the Merger Fraction, Sizes and Morphologies of the Brightest $z \sim 7$ Galaxies
Maruša Bradač	University of California – Davis		GO	The Power of the Great Observatories: Investigating Stellar Properties out to $z \sim 10$ with <i>HST</i> and <i>Spitzer</i>
Joseph Burchett	University of Massachusetts – Amherst		AR	A Deep Survey of Low-redshift Absorbers and Their Connections with Galaxies: Probing the Roles of Dwarfs, Satellites, and Large-scale Environment
Zheng Cai	University of Arizona		GO	Probing Quasar Host Galaxy of a Quasar at $z = 2.1$ with Damped Lyman-Alpha System as Coronagraph
Peter Capak	California Institute of Technology		GO	A Detailed Dynamical and Morphological Study of $5 < z < 6$ Star, Dust, and Galaxy Formation with ALMA and <i>HST</i>
Marcella Carollo	Eidgenössische Technische Hochschule	YES	GO	The Star-formation Histories within Clumpy Disks at $z \sim 2.2$
Marco Castellano	INAF, Osservatorio Astronomico di Roma	YES	GO	A Clear Patch in the Dark-age Universe? Looking for Reionization Sources around Two Bright Ly-alpha Emitting Galaxies at $z = 7$
Stephe Cenko	NASA Goddard Space Flight Center		GO	UV Spectroscopy of Newly Discovered Tidal Disruption Flares
Rupali Chandar	University of Toledo		GO	H-alpha LEGUS: Unveiling the Interplay Between Stars, Star Clusters, and Ionized Gas
Asantha Cooray	University of California – Irvine		AR	Behind the Mask: Are First-light Galaxies or Intrahalo-light Stars Dominating the Unresolved IR Background Fluctuations?
Aleksandar Diamond-Stanic	University of Wisconsin – Madison		GO	How Compact is the Stellar Mass in Eddington-limited Starbursts?
Tanio Diaz-Santos	California Institute of Technology		GO	Tracking the Obscured Star Formation Along the Complete Evolutionary Merger Sequence of LIRGs
Harald Ebeling	University of Hawaii		SNAP	Beyond MACS: A Snapshot Survey of the Most Massive Clusters of Galaxies at $z > 0.5$
Sara Ellison	University of Victoria		GO	Feeding and Feedback: The Impact of AGN on the Circumgalactic Medium

## Accepted Proposals

Name	Institution	ESA Member	Type	Title
Bruce Elmegreen	IBM T. J. Watson Research Center		GO	Multiband Observations of a Local Tadpole Galaxy
Andrew Fabian	University of Cambridge	YES	GO	H-alpha Filaments and Feedback in NGC 4696 at the Centre of the Centaurus Cluster
Xiaohui Fan	University of Arizona		GO	C <sub>III]</sub> Emission in $z = 5.7$ Galaxies: A Pathfinder for Galaxy Spectroscopy in the Reionization Era
Xiaohui Fan	University of Arizona		GO	Galactic Environment of a Twenty-billion Solar-mass Black Hole at the End of Reionization
Mark Fardal	University of Massachusetts – Amherst		AR	Simulating the Impact of a Recent Merger on M31's Disk
Emanuele Farina	Max Planck Institute for Astronomy	YES	GO	The Lyman-alpha Extended Halo of a Quasar at $z > 6$
Ryan Foley	University of Illinois at Urbana – Champaign		GO	Testing the Standardizability of Type Ia Supernovae with the Cepheid Distance of a Twin Supernova
John Forbes	University of California – Santa Cruz		AR	Predictive Simulations of Metals Ejected from Galaxies in Galactic Winds
Amy Furniss	Stanford University		GO	Disentangling Signatures of Ultra-high-energy Cosmic Rays from a Unique Gamma-ray Blazar
Raphael Gobat	CEA/DSM/ DAPNIA/Service d'Astrophysique	YES	GO	A Complete Census of Galaxy Activity in a Massive $z > 1.5$ cluster: Probing the SF-density Relation Down to the Low $M^*$ Regime
Jenny Greene	Princeton University		GO	The Hosts of Megamaser Disk Galaxies (II)
Michael Gregg	University of California – Davis		GO	Morphological Transformation in the Coma Cluster
Yicheng Guo	University of California – Santa Cruz		AR	Mining the Treasuries: Dwarf Galaxies at $0.5 < z < 1$ as Lynchpins for Galaxy Formation and Feedback
Frederick Hamann	University of Florida		GO	Testing the Youth and Transition Object Status of FeLoBAL Quasars
Matthew Hayes	Stockholm University	YES	GO	Unveiling the Dark Baryons: The First Imaging of Circumgalactic OVI in Emission
Matthew Hayes	Stockholm University	YES	GO	Ultraviolet Spectroscopy of the Extended Lyman-alpha Reference Sample
Matthew Hayes	Stockholm University	YES	GO	How Lyman-alpha Bites/Beats the Dust
Timothy Heckman	The Johns Hopkins University		GO	Measuring the Impact of Starbursts on the Circum-Galactic Medium
Benne Holwerda	Sterrewacht Leiden	YES	SNAP	Starlight Absorption Reduction through a Survey of Multiple Occulting Galaxies (STARSMOG)
Cameron Hummels	University of Arizona		AR	The COS Cold Absorber Puzzle: Understanding the Metallicity and Phase of the Circumgalactic Medium
Edward Jenkins	Princeton University		GO	Using ISM Abundances in the SMC to Correct for Element Depletions by Dust in QSO Absorption-line Systems
Saurabh Jha	Rutgers the State University of New Jersey		GO	Rings within Rings: High-resolution Imaging of a Spectacular Gravitational Lens

## Accepted Proposals

Name	Institution	ESA Member	Type	Title
Jeyhan Kartaltepe	National Optical Astronomy Observatory		GO	Probing the Most Luminous Galaxies in the Universe at the Peak of Galaxy Assembly
Dale Kocevski	University of Kentucky		GO	Are Compton-thick AGN the Missing Link between Mergers and Black Hole Growth?
Michael Koss	Eidgenössische Technische Hochschule	YES	GO	A Candidate Recoiling Black Hole in a Nearby Dwarf Galaxy
Steven Kraemer	Catholic University of America		GO	Do QSO2s have Narrow-line Region Outflows? Implications for Quasar-mode Feedback
Varsha Kulkarni	University of South Carolina Research Foundation		GO	Probing Structure in Cold Gas at $z \lesssim 1$ with Gravitationally Lensed Quasar Sightlines
Andy Lawrence	University of Edinburgh, Institute for Astronomy	YES	SNAP	Slow-blue PanSTARRS Transients: High-amplification Microlens Events?
Vianney Lebouteiller	CEA/DSM/DAPNIA/Service d'Astrophysique	YES	GO	Does Star Formation Proceed Differently in Metal-poor Galaxies?
Bret Lehmer	The Johns Hopkins University		GO	Unveiling the Black Hole Growth Mechanisms in the Protocluster Environment at $z \sim 3$
Claus Leitherer	Space Telescope Science Institute		AR	Unearthing a Treasure Trove of Ultraviolet Galaxy Spectra
Adam Leroy	Associated Universities, Inc.		GO	Maps of Recent Star Formation to Match ALMA Observations of the Nearest Nuclear Starburst
Andrew Levan	The University of Warwick	YES	GO	Pinpointing the Location and Host of the Candidate Tidal Disruption Swift J1112.3-8238
Jennifer Lotz	Space Telescope Science Institute		AR	Galaxy Mergers, AGN, and Quenching in $z > 1$ Proto-Clusters
Yu Lu	Stanford University		AR	Testing Feedback Models of Galaxy Formation Using COS-Halos Survey Data
Joe Lyman	The University of Warwick	YES	GO	The Environments and Progenitors of Calcium-rich Transients
Piero Madau	University of California – Santa Cruz		AR	Simulating the Circumgalactic Medium and the Cycle of Baryons in and out of Galaxies
Juan Madrid	Swinburne University of Technology		GO	Extreme Variability in the M87 Jet
Stephan McCandliss	The Johns Hopkins University		SNAP	High-efficiency SNAP Survey for Lyman-alpha Emitters at Low Redshift
Ian McGreer	University of Arizona		GO	A Powerful Starburst at $z = 5.4$ with Strong Lyman-alpha Emission: Resolved SED with <i>HST</i>
Matthew McQuinn	University of Washington		AR	Quasar Lifetimes and Helium Reionization from HeII Proximity Zones
Massimo Meneghetti	Jet Propulsion Laboratory		AR	Simulating <i>HST</i> Observations of Strong Lensing Clusters
Eileen Meyer	Space Telescope Science Institute		GO	The Real Impact of Extragalactic Jets on Their Environments: Measuring the Advance Speed of Hotspots with <i>HST</i>

## Accepted Proposals

Name	Institution	ESA Member	Type	Title
Eileen Meyer	Space Telescope Science Institute		GO	Solving the X-ray Origin Problem in Kiloparsec-scale Relativistic Jets: <i>Hubble</i> Provides the Missing Key
Adam Muzzin	Sterrewacht Leiden	YES	GO	Resolved H-alpha Maps of Star-forming Galaxies in Distant Clusters: Towards a Physical Model of Satellite Galaxy Quenching
Desika Narayanan	Haverford College		AR	Cold Galaxies on FIRE: Modeling the Most Luminous Starbursts in the Universe with Cosmological Zoom Simulations
Anna Nierenberg	University of California – Santa Barbara		GO	Detecting Dark Matter Substructure with Narrow Line Lensing
Pascal Oesch	Yale University		GO	A Spectroscopic Redshift for the Most Luminous Galaxy Candidate at $z \sim 10$
Sally Oey	University of Michigan		GO	Mapping the LyC-emitting Regions of Local Galaxies
Joshua Peek	Columbia University in the City of New York		GO	Galactic Accretion Unveiled: A Unique Opportunity with COS and M33
Molly Peeples	Space Telescope Science Institute		AR	MAST Interface to Synthetic Telescopes with yt (MISTY): Observing Simulations of the Intergalactic Medium
Steven Penton	Space Telescope Science Institute		AR	The Search for Diffuse Intergalactic and Circumgalactic Emission with the Cosmic Origins Spectrograph
Eric Perlman	Florida Institute of Technology		GO	The Physics of the Jets of Powerful Radio Galaxies and Quasars
Céline Péroux	Laboratoire d'Astrophysique de Marseille	YES	GO	The Stellar Continuum Light from Damped Lyman-alpha Absorber Galaxies Detected with Integral Field Spectroscopy
Bradley Peterson	The Ohio State University		GO	A Cepheid-based Distance to the Benchmark AGN NGC 4151
Annalisa Pillepich	Harvard University		AR	Clusters of Galaxies in the Last Five Billion Years: from the Brightest Cluster Galaxy to the Intra-cluster Light
Naveen Reddy	University of California – Riverside		GO	Stellar Populations and Ionization States of Lyman-alpha Emitters During the Epoch of Peak Star Formation
Adam Riess	The Johns Hopkins University		GO	The Fifth and Final Epoch
Andrew Robinson	Rochester Institute of Technology		AR	Do Supermassive Black Holes Really Reside at the Centers of Their Host Galaxies?
Abhijit Saha	National Optical Astronomy Observatory		GO	Establishing a Network of Next Generation SED Standards with DA White Dwarfs
Karin Sandstrom	University of Arizona		GO	A New View of Dust at Low Metallicity: The First Maps of SMC Extinction Curves
Edward Shaya	University of Maryland		GO	The Proper Motion of M31 Vast Plane Galaxy LGS3
Brian Siana	University of California – Riverside		AR	Quantifying Bursty Star Formation and Dust Extinction in Dwarf Galaxies at $0.75 < z < 1.5$
Greg Snyder	Space Telescope Science Institute		AR	Observing the Origins of Galaxy Structure in the Illustris Simulation
Daniel Stern	Jet Propulsion Laboratory		GO	Clusters Around Radio-loud AGN: Spectroscopy of Infrared-selected Galaxy Clusters at $z > 1.4$

## Accepted Proposals

Name	Institution	ESA Member	Type	Title
Thaisa Storchi-Bergmann	Universidade Federal do Rio Grande do Sul		GO	Constraining the Structure of the Narrow-line Region of nearby QSOs
David Syphers	University of Colorado at Boulder		AR	The First Direct Measurement of the 2–3 Rydberg Quasar Continuum for a Statistical Sample
Nial Tanvir	University of Leicester	YES	GO	GRB Hosts and the Search for Missing Star Formation at High Redshift
Nicolas Tejos	University of California – Santa Cruz		GO	Absorption in the Cosmic Web: Characterizing the Intergalactic Medium in Cosmological Filaments
Nicolas Tejos	University of California – Santa Cruz		AR	The Intergalactic Medium in the Cosmic Web
Nicolas Tejos	University of California – Santa Cruz		GO	Characterizing the Cool and Warm-hot Intergalactic Medium in Clusters at $z < 0.4$
Trinh Thuan	The University of Virginia		GO	Green Peas and Diagnostics for Lyman-continuum Leaking in Star-forming Dwarf Galaxies
Monica Valluri	University of Michigan		AR	Quantifying the Bias in the Masses of Supermassive Black Holes in Barred Galaxies
Pieter van Dokkum	Yale University		GO	Distances and Stellar Populations of Seven Low Surface-brightness Galaxies in the Field of M101
Pieter van Dokkum	Yale University		GO	Fluctuation Spectroscopy with the ACS Ramp Filters: a New Way to Measure the IMF in Elliptical Galaxies
David Wake	University of Wisconsin – Madison		AR	Identifying the Progenitors of Massive Early-type Galaxies: A Complete Census of the Properties of S2CLS Submillimeter Selected Galaxies
Bart Wakker	University of Wisconsin – Madison		AR	The Spectral Shape of the Ionizing Extragalactic Background Radiation at $z \sim 0$
Julie Wardlow	Dark Cosmology Centre, Niels Bohr Institute	YES	GO	The Nature and Environment of the Earliest Dusty Starburst Galaxies
Tracy Webb	McGill University		GO	Understanding the In-Situ Star Formation in a $z = 1.7$ Cluster-core Galaxy
Rogier Windhorst	Arizona State University		AR	Project ALCATRAZ: Archival Lyman-continuum and Theoretical Reionization Analysis versus $z$ : Where, When, How and How Much Does LyC Escape?
John Wise	Georgia Institute of Technology		AR	Revealing the Properties of the Frontier Fields Galaxies
Aida Wofford	CNRS, Institut d'Astrophysique de Paris	YES	GO	COS Views of Local Galaxies Approaching Primeval Conditions
Gabor Worseck	Max-Planck-Institut für Astronomie, Heidelberg	YES	GO	A Potential Paradigm Shift in our Understanding of Helium Reionization
Guy Worthey	Washington State University		AR	Stellar Evolutionary Isochrones for Galaxy Evolution
Stephen Zepf	Michigan State University		AR	Use of Wide-Field ACS Mosaics to Determine Total Properties of Globular Cluster Systems
<b>Planetary Programs</b>				
Luigi Bedin	Osservatorio Astronomico di Padova	YES	GO	Astrometric Search for Planets in the Closest Brown Dwarf Binary System Luhman 16AB

## Accepted Proposals

Name	Institution	ESA Member	Type	Title
Susan Benecchi	Planetary Science Institute		GO	Precise Orbit Determination for a <i>New Horizons</i> KBO
Susan Benecchi	Planetary Science Institute		GO	Origin and Composition of the Ultra-red Kuiper Belt Objects
Marc Buie	Southwest Research Institute		GO	Observations of the Pluto System During the <i>New Horizons</i> Encounter Epoch
Elodie Choquet	Space Telescope Science Institute		GO	STIS Coronagraphy of a Debris Disk Newly Discovered Around a Young M Dwarf
John Clarke	Boston University		GO	<i>HST</i> Observations of Comet-induced Aurora on Mars during the Siding Spring Encounter
John Clarke	Boston University		GO	Seasonal Dependence of the Escape of Water from the Martian Atmosphere
Ernst de Mooij	University of Toronto		GO	Characterizing the Atmosphere of the Super-Earth 55Cnc e
Imke de Pater	University of California – Berkeley		GO	Giant Impacts on Giant Planets
John Debes	Space Telescope Science Institute		GO	An Autopsy of Dead Planetary Systems with COS
John Debes	Space Telescope Science Institute		GO	Pushing to 8 AU in the Archetypal Protoplanetary Disk of TW Hya
David Ehrenreich	Observatoire de Genève	YES	GO	Search for an Evaporating Ocean on the Super-Earth HD 97658b
Luca Fossati	Universität Bonn, Argelander Institut für Astronomie	YES	GO	Unveiling the Circumstellar Environment of the Most Extreme Hot-Jupiters
Boris Gänsicke	The University of Warwick	YES	SNAP	The Frequency and Chemical Composition of Rocky Planetary Debris around Young White Dwarfs: Plugging the Last Gaps
Carol Grady	Eureka Scientific Inc.		GO	A Chemical Inventory of Gas and Star-grazing Exocomets in HD 172555
Caitlin Griffith	University of Arizona		GO	Elementary Abundances of Planetary Systems
William Grundy	Lowell Observatory		GO	Orbits and Physical Properties of Four Binary Transneptunian Objects
Amanda Hendrix	Planetary Science Institute		GO	The Ultraviolet Spectrum of Ceres
Amanda Hendrix	Planetary Science Institute		GO	UV Spectra of the Icy Saturnian Satellites: Understanding Exogenic Processes and NH <sub>3</sub> in the System
Dean Hines	Space Telescope Science Institute		GO	Imaging Polarimetry of the 67P/Churyumov-Gerasimenko with ACS: Supporting the Rosetta Mission
David Jewitt	University of California – Los Angeles		GO	<i>Hubble</i> Imaging of a Newly Discovered Active Asteroid
David Jewitt	University of California – Los Angeles		GO	Determining the Nature and Origin of Mass Loss from Active Asteroid P/2013 R3
David Jewitt	University of California – Los Angeles		GO	Determining the Nature and Origin of Mass Loss from Active Asteroid P/2013 P5
Nathan Kaib	Northwestern University/CIERA		AR	The Influence of Stellar Companions on Fomalhaut's Planetary System
Paul Kalas	University of California – Berkeley		GO	Testing the Correlation between Low-mass Planets and Debris Disks

## Accepted Proposals

Name	Institution	ESA Member	Type	Title
Paul Kalas	University of California – Berkeley		GO	Scattered-light Imaging of Fomalhaut’s Ice-line Belt to Understand Dynamical Upheavals in Planetary Systems
Jian-Yang Li	Planetary Science Institute		GO	Comet Siding Spring at Mars: Using MRO to Interpret <i>HST</i> Imaging of Comets
Melissa McGrath	NASA Marshall Space Flight Center		GO	Europa’s Composition as Revealed by its Atmosphere
Carl Melis	University of California – San Diego		GO	Confirming the Most Water-rich Extrasolar Rocky Body
Darin Ragozzine	Florida Institute of Technology		GO	The Intriguing Formation of Haumea’s Satellites
Kurt Retherford	Southwest Research Institute		GO	Io’s Atmosphere Silhouetted in Transit by Jupiter Lyman-alpha
Lorenz Roth	Southwest Research Institute		GO	Europa’s Water Vapor Plumes: Systematically Constraining their Abundance and Variability
Kunio Sayanagi	Hampton University		GO	Target of Opportunity Observation of an Episodic Storm on Uranus
Eric Schindhelm	Southwest Research Institute		GO	Contemporaneous Mid-UV Spectral Coverage of Pluto and Charon Coincident with the <i>New Horizons</i> Encounter
Hilke Schlichting	Massachusetts Institute of Technology		AR	Probing Sub-km-sized Kuiper Belt Objects with Stellar Occultations
Glenn Schneider	University of Arizona		GO	Decoding Debris System Substructures: Imprints of Planets/Planetesimals and Signatures of Extrinsic Influences on Material in Ring-like Disks
Bruno Sicardy	Observatoire de Paris and Paris 6 Université	YES	GO	Observation of Chariklo’s Rings and the Surroundings of Chiron
William Sparks	Space Telescope Science Institute		GO	The Ice Plumes of Europa
David Trilling	Northern Arizona University		GO	Constraining the History of the Outer Solar System: Definitive Proof with <i>HST</i>
Harold Weaver	The Johns Hopkins University Applied Physics Laboratory		GO	Using <i>Hubble</i> to Measure Volatile Abundances and the D/H Ratio in a Bright ToO Comet
Ming Zhao	The Pennsylvania State University		GO	Near-IR Spectroscopy of the Newly Discovered Benchmark Hot Jupiter WASP-103b
<b>Galactic Programs</b>				
Jeremy Bailin	University of Alabama		AR	A Clumpy Model for Self-Enrichment in Globular Clusters
Travis Barman	University of Arizona		AR	Modeling the Extreme Ultraviolet Radiation from M Dwarfs
Robert Benjamin	University of Wisconsin – Whitewater		GO	The Windy Milky Way Galaxy
Eric Blackman	University of Rochester		AR	Triggered Star Formation from Shock to Disk
Howard Bond	The Pennsylvania State University		GO	The Origin of Intermediate-luminosity Red Transients

## Accepted Proposals

Name	Institution	ESA Member	Type	Title
Michael Boylan-Kolchin	University of Maryland		AR	Star-formation Histories of Dwarf Galaxies: Keys to Galaxy Formation and Dark Matter Structure
Thomas Brown	Space Telescope Science Institute		GO	A Direct Distance to an Ancient Metal-poor Star Cluster
Esther Buenzli	Max-Planck-Institut für Astronomie, Heidelberg	YES	GO	A Direct Probe of Cloud Holes at the L/T Transition
Nuria Calvet	University of Michigan		AR	The Formation of Lyman-alpha Fluorescent H <sub>2</sub> Lines in Protoplanetary Disks Surrounding Young Solar-mass Stars
John Cannon	Macalester College		GO	Fundamental Parameters of the SHIELD II Galaxies
Stephen Cenko	NASA Goddard Space Flight Center		GO	Characterizing New Fast Optical Transients with <i>HST</i> : Astrometry, Geometry, and Host Galaxies
Denija Crnojevic	Texas Tech University		GO	Resolving the Faint End of the Satellite Luminosity Function for the Nearest Elliptical Centaurus A
Arlin Crofts	Columbia University in the City of New York		GO	Understanding New Structures Ejected from Recurrent Nova T Pyx
Julianne Dalcanton	University of Washington		GO	Emission-line Stars in Andromeda
Annalisa De Cia	Weizmann Institute of Science		GO	The Environment of the Rarest and Most Energetic Supernovae: Do Pair-instability Explosions Exist in the Nearby Universe?
Andrea De Luca	INAF, Istituto di Astrofisica Spaziale Milano	YES	GO	Imaging the Crab Nebula when it is Flaring in Gamma-rays
Nathalie Degenaar	University of Michigan		GO	The Evolutionary Link between Low-mass X-ray Binaries and Millisecond Radio Pulsars
Jeremy Drake	Smithsonian Institution Astrophysical Observatory		GO	The First Mass and Angular Momentum Loss Measurements for a CV-like Binary
Gaspard Duchene	University of California – Berkeley		GO	Imaging the Tenuous Dusty Atmosphere of Edge-on Protoplanetary Disks
Trent Dupuy	University of Texas at Austin		GO	Dynamical Masses for Free-floating Planetary-mass Binaries
Catherine Espaillat	Boston University		GO	Testing EUV Photoevaporation Models in Young Disks
Xuan Fang	Instituto de Astrofisica de Andalucía	YES	GO	UV Mapping of the Shocks in the Extremely Collimated Outflows of the Protoplanetary Nebula Hen 3-1475
Alex Filippenko	University of California – Berkeley		GO	Early-time UV Spectroscopy of Stripped-envelope Supernovae: A New Window
Gaston Folatelli	Institute for Physics and Mathematics of the Universe		GO	iPTF 13bvn: First Identification of the Progenitor of a Type Ib Supernova
Ryan Foley	University of Illinois at Urbana–Champaign		GO	Understanding the Progenitor Systems, Explosion Mechanisms, and Cosmological Utility of Type Ia Supernovae
Andrew Fox	Space Telescope Science Institute	YES	GO	The Smith Cloud: Galactic or Extragalactic?



## Accepted Proposals

Name	Institution	ESA Member	Type	Title
Ori Fox	University of California – Berkeley		GO	Uncovering the Putative B-Star Binary Companion of the SN 1993J Progenitor
Ori Fox	University of California – Berkeley		GO	UV Spectroscopic Signatures from Type Ia Supernovae Strongly Interacting with a Circumstellar Medium
Adam Frank	University of Rochester		AR	The Reel Deal In 3D: The Spatio-temporal Evolution of YSO Jets
Avishay Gal-Yam	Weizmann Institute of Science		GO	Explosions in Real-time: Ultra-rapid UV Flash Spectroscopy of Infant Core-collapse Supernovae
Alexandre Gallenne	Universidad de Concepción		GO	Accurate Masses and Distances of the Binary Cepheids S Mus and SU Cyg
Aaron Geller	Northwestern University		AR	Modeling the Origins of Sub-subgiant Stars
Mario Gennaro	Space Telescope Science Institute		GO	Investigating the Low-mass Slope and Possible Turnover in the LMC IMF
Or Graur	The Johns Hopkins University		GO	Constraining Type Ia Supernova Nucleosynthesis and Explosion Models Using Late-time Photometry of SN2011fe and SN2012cg
Edward Guinan	Villanova University		GO	<i>HST</i> /COS FUV Spectrophotometry of the Key Binary Solar Twins 16 Cyg A&B: Astrophysical Laboratories for the Future Sun and Older Solar Analogs
Todd Henry	Georgia State University Research Foundation		GO	Pinpointing the Characteristics of Stars and Not Stars
Benne Holwerda	Sterrewacht Leiden	YES	GO	The Anemic Stellar Halo of M101
C. Jeffery	Armagh Observatory	YES	GO	Heavy-metal, Extreme Chemistry and Puzzling Pulsation: Ultraviolet Clues to the Formation of Hot Subdwarfs
Saurabh Jha	Rutgers the State University of New Jersey		GO	The Progenitor System of a Peculiar Thermonuclear White-Dwarf Supernova
Jason Kalirai	Space Telescope Science Institute		GO	Which Stars Go BOOM?
Jason Kalirai	Space Telescope Science Institute		GO	The Metallicity Dependence of the Initial Mass Function
David Kaplan	University of Wisconsin – Milwaukee		GO	A $1.05_{\odot}$ Companion to PSR J2222-0137: the Coolest Known White Dwarf?
Mansi Kasliwal	Carnegie Institution of Washington		GO	Testing a Globular Cluster Origin for Elusive Calcium-rich Gap Transients
Wolfgang Kerzendorf	University of Toronto		GO	SN 2011fe—Tackling the Type Ia Progenitor Puzzle through Extremely Late-time Photometry
Andreas Koch	Landessternwarte Heidelberg	YES	GO	The Age-metallicity Relationship of the Galactic Bulge via Stromgren Photometry
Andrew Levan	The University of Warwick	YES	GO	The Progenitors of the Longest Duration High-energy Transients
Kevin Luhman	The Pennsylvania State University		GO	Characterizing the Sun's 4th Closest Neighbor and the Coldest Known Brown Dwarf
Nicolas Martin	Université de Strasbourg I	YES	GO	Fellowship of the Andromeda Dwarf Galaxies: A Census of their Extended Star-formation Histories

## Accepted Proposals

Name	Institution	ESA Member	Type	Title
Derck Massa	Space Science Institute		SNAP	Filling the Gap—Near-UV, Optical and Near-IR Extinction
Philip Massey	Lowell Observatory		GO	The Nature of Newly Discovered Wolf-Rayet Stars in the LMC
Philip Massey	Lowell Observatory		GO	WO-Type Wolf-Rayet Stars: the Last Hurrah of the Most Massive Stars?
Justyn Maund	The Queen's University of Belfast	YES	GO	Stellar Forensics VI: A Post-explosion View of the Progenitor of SN 2012aw
Kristen McQuinn	University of Minnesota – Twin Cities		GO	Important Nearby Galaxies without Accurate Distances
S. Megeath	University of Toledo		GO	WFC3 Spectroscopy of Faint Young Companions to Orion Young Stellar Objects
Christopher Mihos	Case Western Reserve University		GO	Stellar Populations in the Outer Disk of M101
Dan Milisavljevic	Harvard University		GO	The Double Supernova in NGC 6984
Caroline Morley	University of California – Santa Cruz		AR	A New Approach to Understanding Brown Dwarf Weather
Lida Oskinova	Universität Potsdam	YES	GO	The Donor Star Winds in High-mass X-ray Binaries
Steven Parsons	Universidad de Valparaíso		GO	Testing the Single-degenerate Channel for Supernovae Ia
Jennifer Patience	Arizona State University		GO	Brown Dwarf Atmosphere Monitoring (BAM!): Characterizing the Coolest Atmosphere
George Pavlov	The Pennsylvania State University		GO	Thermal Evolution of Old Neutron Stars
Véronique Petit	University of Delaware		GO	Probing the Extreme Wind Confinement of the Most Magnetic O Star with COS Spectroscopy
Robert Quimby	Institute for Physics and Mathematics of the Universe		GO	The First UV Spectra of a Hydrogen-rich Superluminous Supernova
Suzanna Randall	European Southern Observatory – Germany	YES	GO	Mapping the Extreme Horizontal-branch Instability Strip in omega Centauri
Seth Redfield	Wesleyan University		GO	Farewell to the <i>Voyagers</i> : Measuring the Local ISM in the Immediate Path of the Two <i>Voyager</i> Spacecraft
Nicole Reindl	IAAT, Eberhard Karls Universität Tübingen	YES	GO	Following the Rapid Evolution of the Central Star of the Stingray Nebula in Real Time
Adam Ritchey	University of Washington		GO	Constraining the Cosmic-ray Acceleration and Gamma-ray Emission Processes in IC 443
Ian Roederer	University of Michigan		AR	The <i>s</i> -process Contribution to Rare, Heavy Elements
Ian Roederer	University of Michigan		GO	A New Opportunity to Detect Iron in the Most Iron-poor Star Known
Ian Roederer	University of Michigan		AR	The Origins of Germanium and the Transition to Neutron-capture Nucleosynthesis
Philip Rosenfield	Università degli Studi di Padova	YES	GO	Constraining Models of Evolved UV-bright Stars in the M31 Bulge
Elena Sabbi	Space Telescope Science Institute		GO	A 3D View of Massive Cluster Formation in the SMC

## Accepted Proposals

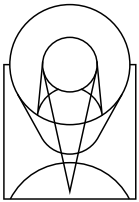
Name	Institution	ESA Member	Type	Title
Hugues Sana	Space Telescope Science Institute	YES	GO	UV Spectroscopy of the Most Massive Overcontact Binary Known to Date: on the Verge of Coalescence?
David Sand	Texas Tech University		GO	A New Dwarf Galaxy Associated with an Ultra-compact High-velocity Cloud
Peter Schneider	Universität Hamburg, Hamburger Sternwarte	YES	GO	The Nature of Stationary Components in Jets from Young Stellar Objects
Benjamin Shappee	The Ohio State University		GO	Whimper of a Bang: Documenting the Final Days of the Nearby Type Ia Supernova 2011fe
Steve Shore	Università di Pisa	YES	GO	Late Nebular-stage High-resolution UV Spectroscopy of Classical Galactic Novae: a Benchmark Panchromatic Archive for Nova Evolution
Stephen Skinner	University of Colorado at Boulder		GO	Tracing Hot Plasma in the RY Tau Jet
Nathan Smith	University of Arizona		GO	Massive Stars Dying Alone: Extremely Remote Environments of SN2009ip and SN2010jp
Jennifer Sokoloski	Columbia University in the City of New York		GO	Imaging Spectroscopy of the Gamma-ray Nova V959
Mon Phillip Stancil	University of Georgia Research Foundation, Inc.		AR	An H <sub>2</sub> /HD Collisional Excitation Database from High-Dimensional Quantum Dynamics Calculations: Benchmarking Interstellar STIS/COS Observations
Paula Szkody	University of Washington		GO	Unprecedented Tracking of the Unique Dwarf Nova GW Lib from Largest Amplitude Outburst to Quiescent Pulsations
Jonathan Tan	University of Florida		GO	Kinematics of a Massive Star Cluster in Formation
Nial Tanvir	University of Leicester	YES	GO	<i>r</i> -process Kilonova Emission Accompanying Short-duration GRBs
Maureen Teyssier	Rutgers the State University of New Jersey		AR	Interpreting Resolved Stellar Populations in Local Group Dwarfs: Results from Cosmological Simulations
David Thilker	The Johns Hopkins University		GO	The Controversial Nature of the Diffuse UV Emission in Galaxies: Exploring NGC 300
Erik Tollerud	Yale University		GO	Resolving the Tip of the Red Giant Branch of Two New Candidate Local Group Dwarf Galaxies
Roeland van der Marel	Space Telescope Science Institute		GO	The Proper Motion Field along the Magellanic Bridge: a New Probe of the LMC-SMC Interaction
Schuyler Van Dyk	California Institute of Technology		GO	A Wolf-Rayet Progenitor for iPTF13bvn?
Schuyler Van Dyk	California Institute of Technology		GO	The Stellar Origins of Supernovae
Nolan Walborn	Space Telescope Science Institute		AR	Comparative Precise Parameters for OB Stars in Three Galaxies
Matthew Walker	Carnegie Mellon University		GO	Is the Crater Satellite the Milky Way's Smallest Dwarf Galaxy or its Largest Globular Cluster?
Lifan Wang	Texas A & M University		GO	Polarimetry of SN 2014J in M82 as a Probe of Its Dusty Environment
Daniel Weisz	University of California – Santa Cruz		GO	Completing the Census of Isolated Dwarf Galaxy Star-formation Histories
Klaus Werner	Eberhard Karls Universität Tübingen	YES	GO	Trans-iron Group Elements in Hot Helium-rich White Dwarfs

## Accepted Proposals

Name	Institution	ESA Member	Type	Title
Benjamin Williams	University of Washington		AR	The Masses of M31 Supernova Remnant Progenitors
David Wilson	The University of Warwick	YES	GO	Accretion of Planetary Debris onto the Unique White Dwarf GD394
Stephen Zepf	Michigan State University		GO	Testing Models of the Black Hole X-ray Source in the NGC 4472 Globular Cluster RZ2109 with COS UV Spectroscopy
<b>Large Programs</b>				
Björn Benneke	California Institute of Technology		GO	Exploring the Diversity of Exoplanet Atmospheres in the Super-Earth Regime
Wendy Freedman	Carnegie Institution of Washington		GO	CHP-II: The Carnegie <i>Hubble</i> Program to Measure H0 to 3% Using Population II
Michael Gregg	University of California – Davis		SNAP	Completing the Next Generation Spectral Library
Saul Perlmutter	University of California – Berkeley		GO	See Change: Testing Time-varying Dark Energy with $z > 1$ Supernovae and their Massive Cluster Hosts
Evan Skillman	University of Minnesota – Twin Cities		GO	Is the First Epoch of Star Formation in Satellite Galaxies Universal? - Part II
John Spencer	Southwest Research Institute		GO	A Kuiper Belt Object for the <i>New Horizons</i> Mission
Todd Tripp	University of Massachusetts – Amherst		GO	The COS Absorption Survey of Baryon Harbors (CASBaH): Probing the Circumgalactic Media of Galaxies from $z = 0$ to $z = 1.5$
<b>Treasury Programs</b>				
Kevin France	University of Colorado at Boulder		GO	The MUSCLES Treasury Survey: Measurements of the Ultraviolet Spectral Characteristics of Low-mass Exoplanetary Systems
Sangeeta Malhotra	Arizona State University		GO	The Faint Infrared Grism Survey (FIGS)
Pascal Oesch	Yale University		GO	The GOODS UV Legacy Fields: A Full Census of Faint Star-forming Galaxies at $z \sim 0.5-2$
Massimo Robberto	Space Telescope Science Institute		GO	The Orion Nebula Cluster as a Paradigm of Star Formation
<b>Pure Parallel Program</b>				
Michele Trenti	University of Cambridge	YES	GO	Bright Galaxies at <i>Hubble's</i> Detection Frontier: The Redshift $z \sim 9-10$ BoRG Pure-parallel Survey
<b>AR Legacy Programs</b>				
Justin Ely	Space Telescope Science Institute		AR	The Lightcurve Legacy of COS and STIS*
Gary Ferland	University of Kentucky		AR	What AGN Reverberation Maps Tell Us: Plasma Simulations of Dense Accreting Gas
Morgan Fouesneau	University of Washington		AR	A Legacy Magellanic Clouds Star Clusters Sample for the Calibration of Stellar Evolution Models
Mariska Kriek	University of California – Berkeley		AR	Maximizing the Impact of CANDELS: Rest-frame Optical Spectroscopy of 2000 Galaxies at $1.4 < z < 3.8$

\*Program not included in the statistics of this article





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## Contact STScI:

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The Institute's website is: <http://www.stsci.edu>

Assistance is available at [help@stsci.edu](mailto:help@stsci.edu) or 800-544-8125.

International callers can use 1-410-338-1082.

For current *Hubble* users, program information is available at:

[http://www.stsci.edu/hst/scheduling/program\\_information](http://www.stsci.edu/hst/scheduling/program_information).

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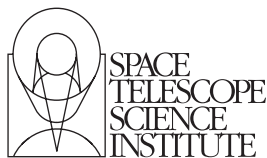
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# Calendar

SWG meeting	2–4 December 2013
NASA Advisory Council meeting	11–12 December 2013
AURA Workforce & Diversity Committee (STScI)	12–13 December 2013
AAS meeting (Washington, DC)	5–9 January 2014
Future of the Workplace Committee meeting	23–24 January 2014
STIC meeting	February/March 2014
Hubble Fellows Symposium	10–12 March 2014
AAAS meeting (Chicago)	13–17 February 2014
Conference "Science with the <i>Hubble Space Telescope</i> IV," (Accademia dei Lincei, Rome) <b><a href="http://www.stsci.edu/institute/conference/hst4">http://www.stsci.edu/institute/conference/hst4</a></b>	17–20 March 2014
Workshop "The Cosmic Distance Scale" (STScI)	31 March–2 April 2014
NASA Advisory Council meeting	16–17 April 2014
AURA Annual meeting	23–27 April 2014
Spring Symposium (STScI) Habitable Worlds Across Time and Space <b><a href="http://www.stsci.edu/institute/conference/habitable-worlds/">http://www.stsci.edu/institute/conference/habitable-worlds/</a></b>	28 April–1 May 2014
Pan-STARRS consortium/workshop (STScI)	23–27 June 2014



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